

Cover Letter

Dated: 31/08/2009

To Commissioner For Patents

Remarks

Interview with the Examiner has been conducted on the 08/28/2009 and 08/31/2009.

Results of this interview are implemented with the amendments listed below:

1. Marked specification amendments "nfed-r1-spec_marked-09aug31.pdf", based on the draft emailed, discussed and basically agreed upon on the 08/28/2009.
2. Marked claim amendments "nfed-r1-clm_marked-09aug31.pdf", based on the draft emailed, discussed and basically agreed upon on the 08/31/2009.
3. Clean claim amendments "nfed-r1-clm-09aug31.pdf".

The specification amendments are characterised below:

1. The priority claim (page 1) has been amended and supplemented with the statement of incorporation by reference.
2. GENERAL DESCRIPTION OF INVENTION COMPONENTS has been amended on page 14, by inserting the major part of claim 29 of the original parent application.
3. Reference to detailed description of SSP circuits and timing in the parent application (page 6) is added to supplement general description of SSP and PCU operations provided below in the GENERAL DESCRIPTION OF INVENTION COMPONENTS.
4. Reference to specific timing diagrams and circuits of the parent application (pages 24, 26 & 27) are added to further explain NFED details shown in FIG.1 / FIG.2 / FIG.3.

The claim amendments are characterised below:

1. The original and previous claims 1-30, are replaced with the new claims 31-35 which use more definite terms supported more clearly by the specification.
2. The marked claim amendments comprise complete references to specification passages and drawings, supporting such new claims.

Ad. 1

The previous claims 23-30 have been replaced with the new claims 31-35.

Ad.2

Specification compliance to the 35 USC 112. has been improved by the above specification amendments.

It has been clarified during the interview that the original parent application (OPA) (i.e. PCT/CA03/000909 published as WO 2004/002052), extensively describes multiple components of the NFED.

The questioned terms "wave capturing circuit", "proximity estimating circuit" and "correlation calculating circuits", have been eliminated from the new claims for different reasons. Nevertheless it is exemplified below that such comprehensive original parent application (OPA) shall be able to support eventual utilisation of these and other similar terms.

In particular the original parent application (OPA) comprises comprehensive and detailed descriptions of:

the "wave capturing circuit", shown in the FIG.1 of this application as similar to that of the FIG.1 of the original parent application (OPA),

wherein the OPA explains and describes it clearly in subsection "General components of the invention" (page 2-3) and "DESCRIPTION OF THE PREFERRED EMBODIMENT" (p. 8-9);

the sequential phase processor (SSP) enabling

wide varieties of "correlation calculating circuits" including those shown in the FIG.3 as

being the integral part of the configuration of 21Dig.FilterArith.1 connected to

21Dig.FilterReg.1 and 21Dig.FilterArith.1 connected to 21Dig.FilterReg.1.,

and very obvious implementations of the "proximity estimating circuit" shown in the FIG.3 as

being the same integral part of the configuration of 21Dig.FilterArith.1 connected to

21Dig.FilterReg.1 and 21Dig.FilterArith.1 connected to 21Dig.FilterReg.1.,

wherein the OPA explains and describes such sequential phase processor in subsection "General components of the invention" (page 2-6) and "DESCRIPTION OF THE PREFERRED EMBODIMENT" (p.8-17).

Therefore the specification amendments, following the interview by strengthening and expanding references to the parent application, shall be effective in improving specification compliance to the 35 USC 112.

Ad. 3

As it has been explained during the interview:

1. The self explanatory naming convention of NFED registers is compliant with the terminology applied throughout the OPA.
2. In compliance with the OPA drawing convention all the registers and multi-line signals are drawn with thick lines, while all the combinatorial circuits (like arithmometers or selectors) and single line signals (like clocks) are drawn with thin lines.

Sources of inputs and destinations of NFED registers outputs, identified by their unique names, are described in the DESCRIPTION OF THE PREFERRED EMBODIMENT.

However the NFED does not include the follow-up circuits located below the 11DigitalFilterReg.3 and 12DigitalFilterReg.3.

This follow-up circuits, starting with the 2:1 SEL and ending on the 1Front EdgeBuf. and 1EndEdgeBuf., belong to the OPA phase processing stages (shown in its FIG..3A and described in its DESCRIPTION OF THE PREFERRED EMBODIMENT).

Nevertheless information about these circuits and their detailed description, has been further expanded in the amended specification in order to improve clarity of the specification.

Ad.4

Compliance with the 35 USC 112 first paragraph have been greatly improved by:
replacing the previous claims with the new claims specifying claimed structures and operative connections among the structures as representing complete operative methods based on complete descriptions;
strengthening claims references base, by expanding NFED specification with stronger and more specific references to the OPA;
providing direct complete references to such NFED and OPA specifications, in the marked copy of the claim amendments.

In addition to such direct references placed in the marked copy of claims, the justification for the common use of the term "phases" is provided below.

The term phases is used in the last statement of the new claims 31-35,
as it synonymous to the term "localization" (determined by sampling instances maintaining known phase displacements [see OPA - claim 29]),
and it is widely supported by the OPA subsection "Sequential Phase Control and Phase Processing Stages" [see OPA - pages 11-17].

Such improved claims supported by the direct complete references, point out and distinctly claim the subject matter contributed by this application.

Since the claimed subject matter is well defined by such references, the claimed subject matter can be determined by one having ordinary skill in the art.

Conclusion

Based on the application amendments and the above clarifications, it is thus respectfully submitted that the invention taught and defined herein by the claims embodies patentable subject matter.

The Examiner is earnestly solicited to give favorable consideration to this application and pass it to allowance.

Respectfully submitted,

By John W. Bogdan